Louisville Metro Air Pollution Control District
701 West Ormsby Avenue, Suite 303
Louisville, Kentucky 40203-3137

February 28, 2020

Federally-Enforceable District-Origin Operating Permit (FEDOOP) Statement of Basis

Source: Republic Conduit Manufacturing
7301 Logistics Dr.
Louisville, KY 40258

Owner: Republic Conduit, Inc.
7301 Logistics Dr.
Louisville, KY 40258

Application Documents:	See Table I-9				
Draft Permit:	2/23/2016; 1/31/2017; 10/22 2019				
Permitting Engineer:	Yiqiu Lin		Permit Number:		O-1553-16-F (R3)
Plant ID:	1553	SIC:	3317	NAICS:	331210

Introduction:

This permit will be issued pursuant to District Regulation 2.17- Federally Enforceable District Origin Operating Permits. Its purpose is to limit the plant wide potential emission rates from this source to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements.

This permit action incorporates construction permit C-1553-1037-18-F for multiple unit modifications and incorporates multiple newly installed insignificant activities. This permit action also updates equipment as requested by the source.

Jefferson County is classified as an attainment area for lead (Pb), nitrogen dioxide (NO_2), carbon monoxide (CO), particulate matter less than 10 microns (PM_{10}), and particulate matter less than 2.5 microns ($PM_{2.5}$). Jefferson County is classified as a nonattainment area for ozone (O_3). This facility is located in the portion of Jefferson County that is an attainment area for sulfur dioxide (SO_2).

Permit Application Type:

☐ Initial issuance

☒ Permit Revision
- ☒ Administrative
- ☐ Minor
- ☒ Significant

☒ Permit renewal

Compliance Summary:

☒ Compliance certification signed
☐ Source is out of compliance
☐ Compliance schedule included
☒ Source is operating in compliance

I. Source Information

1. Product Description:

Republic Conduit Manufactures steel pipes and tubes from purchased steel coils.

2. Process Description:

At Republic Conduit Manufacturing plant, steel coils are fed into weld mills to make pipes or tubes. The steel pipes and tubes are galvanized in LEMT electro galvanizing line or hot dip galvanizing line. The steel pipes and tubes may be threaded or painted as needed at the plant.

3. Site Determination:

There are no other facilities that are contiguous or adjacent to this facility.

4. Emission Unit Summary:

Emission Unit	Equipment Description
U1	Weld mills, including three (3) 18 ton/hr weld mills and one (1) cooling tower.
U2	LEMT electro galvanizing line
U3	Hot dip galvanizing line
U4	Thread line
U5	Natural gas-fired boilers and heaters
U6	Paint coating operations
IA1	Emergency Generator
IA2	Storage Tanks and Totes
IA3	Parts washers

5. Fugitive Sources:

The fugitive sources identified by the source are various paint coating operations.

6. Permit Revisions:

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
O-1553-16-F	2/23/2016	3/28/2016	2/23/2016	Initial Permit Issuance and Owner name changed from TENARIS USA to Maverick C&P, Inc.
O-1553-16-F (R1)	1/31/2017	3/06/2017	Admin Revision	Typo corrections on pages 21, 27, 36, and 41 – change “quarterly” to “annual” Typo corrections on pages 51 and 52 - change “semi-annual” to “annual”

Permit No.	Public Notice Date	Issue Date	Change Type	Description/Scope
				Removed HCl recovery unit from U3-E23 and added "Source-Wide Activities Not Otherwise Regulated"
			Significant Revision	Revise General Condition #10 to remove GHG limit.
O-1553-16-F (R2)	N/A	6/20/2018	Admin Revision	Ownership change. Addition of two new LEMT line burners (IAs) and removal of thermal oxidizer C22. Revision of emission factors in Attachment B.
O-1553-16-F (R3)	10/22/2019	2/28/2020	Admin Revision	Update unit information per application. Incorporation of IAs.
			Significant Revision	Incorporation of construction permit C-1553-1037-18-F. Removed Pb and Cd risks for weld mills (U1) and removed risks for IA emergency generator. Updated Cr(6) risk value for U3-E28 per newly tested emission factor.

7. Construction Permit History:

Permit No.	Issue Date	Description
13-05-C	3/31/2006	LEMT electro galvanizing line
14-05-C	3/31/2006	One (1) wet scrubber #2 (9G)
15-05-C	3/31/2006	One (1) LEMT inch mark printer (E9I)
18-05-C	3/31/2006	Hot dip galvanizing line
19-05-C	3/31/2006	One (1) wet scrubber #3 (11B)
22-05-C	3/31/2006	Rigid finishing line (E13AB1 - E13C5)
25-05-C	3/31/2006	Zinc dissolution process
26-05-C	3/31/2006	Wastewater treatment plant
27-05-C	3/31/2006	Parts washers
474-07-C	8/31/2008	Three (3) existing weld mills
475-07-C	8/31/2008	One (1) baghouse, make Farr APC, model GS20.
443-08-C	6/30/2008	535 BHP (399 kW-hr) emergency generator
526-08-C	9/10/2008	Mist eliminator from the passivation process
587-08-C	10/31/2008	Three (3) storage tanks
588-08-C	10/13/2008	Aerosol touch up coating operation
589-08-C	10/31/2008	Weld flaw ink mark coating
692-08-C	11/30/2008	small diameter thread line surface coating
693-08-C	11/30/2008	Coating for large diameter thread line
20-05-C(R2)	12/8/2009	Hot dip galvanizing line

Permit No.	Issue Date	Description
21-05-C(R1)	10/31/2009	Baghouse for hot dip galvanizing
24-05-C(R1)	7/31/2009	Combustion sources
28-05-C(R2)	3/31/2009	Storage tanks
93-08-C	1/31/2009	Gimeco hydrochloric acid recovery unit
32-09-C	3/31/2009	One (1) 12,750 gallon paint tank, T-2.
33-09-C	1/31/2009	Two (2) ultra violet ink printers
34-09-C	1/31/2009	Three (3) storage tanks
130-09-C	6/30/2009	Metaullics zinc recovery (MZR) system
20-10-C	2/5/2010	cold solvent parts washer
54-10-C	4/13/2010	Two (2) cold solvent parts washers
35226-12-C	5/30/2012	change to water based paint
C-1553-1037-18-F	12/7/2018	Construction permit for miscellaneous equipment modification, replacement, and new installation for U1, U3, U5, and IA2.

8. Application and Related Documents

Document Number	Date	Description
22917	12/28/2007	Original FEDOOP Application[1]
22918	8/7/2008	FEDOOP Permit Application Addendum[1]
75913	9/16/2008	Name/Address Change document issued by Secretary of State1
22919	10/29/2009	Revised FEDOOP Permit Application[1]
22920	10/7/2010	Revised FEDOOP Permit Application1
33895	11/4/2011	Revised FEDOOP Permit Application1
35744	2/1/2012	Revised FEDOOP Permit Application including new constructions[1]
78690	7/29/2016	Correspondence for TV permit administrative revision[2]
78691	7/29/2016	Correspondence for TV permit administrative revision2
78699	8/1/2016	Application form AP-100A to change Responsible Official
80589	11/23/2016	Correspondence related to description change of E23
81389	01/20/2017	Draft Permit sent for company review
90914	2/28/2018	Amended KY State Certificate of Authority
90915	2/28/2018	Application AP100A for RO and Ownership Change
90916	2/28/2018	LMAPCD Response Confirmation Receipt
90998	3/5/2018	Request of Certificate of Authority

[1] For permit O-1553-16-F initial issuance issued 3/28/2016
[2] For permit O-1553-16-F(R1) administrative revision issued 3/06/2017

Document Number	Date	Description
90999	3/5/2018	Co Response to District Admin Change
91609	3/7/2018	Received New Certificate of Authority
91111	3/9/2018	Construction application for new LEMT burners
91139, 91183, 91228, 91248, 91265, 91270, 91301	3/14, 3/15, 3/20, 3/21, 3/22, 3/23, 3/26/2018	Correspondences for updated emission factors
91464	3/21/2018	Plantwide PTE update
91518	4/11/2018	No permit required letter for new burners sent to company
94045	8/31/2018 to 9/14/2018	Construction application, construction PTE evaluation, and NPR determination for new zinc dissolver tank
94354	9/21/2018 to 10/1/2018	Construction application, construction PTE evaluation, and temporary exemption for multiple equipment.
95772	11/7/2018	Construction permit draft send to company for pre-review and company comments on draft permit.
96243	11/27/2018	District response to company comments.
96400	12/7/2018	Final construction permit C-1553-1037-18-F issued.
98267	4/29/2019	Application 100A for temporary generator
98281	5/1/2019	Exemption approval for temporary diesel generator
98383	5/9/2019	Operating application for FEDOOP permit revision and construction application for inkjet printers
98549	5/30/2019	IA determination for two inkjet printers
98619	6/5/2019	Construction application for seven flaw paint spray guns
98654	6/7/2019	Construction application for seven flaw paint spray guns (revised)
2764	6/24/2019	NPR determination for seven flaw paint spray guns
2696	7/12/2019	Construction application for thread line paint filters
2766	7/15/2019	NPR determination for thread line paint filters
OB124999	11/22/2019	Company comments on draft FEDOOP permit

9. Emission Summary

Pollutant	District Calculated Actual Emissions (tpy) 2017 Data	Pollutant that triggered Major Source Status (based on PTE)
CO	5.51	No
NO_x	6.58	No
SO_2	0.04	No
PM_{10}	10.15	No

Pollutant	District Calculated Actual Emissions (tpy) 2017 Data	Pollutant that triggered Major Source Status (based on PTE)
VOC	36.01	Yes
Total HAPs	0.87	No
Single HAP	0.23	Yes

10. Applicable Requirements

☐ 40 CFR 60 ☒ SIP ☒ 40 CFR 63

☐ 40 CFR 61 ☒ District Origin ☐ Other

11. Referenced MACT Federal Regulations:

40 CFR 63 Subpart WWWWWW	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

12. Referenced non-MACT Federal Regulations:

None

II. Regulatory Analysis

1. Acid Rain Requirements:

Republic Conduit Manufacturing is not subject to the Acid Rain Program.

2. Stratospheric Ozone Protection Requirements:

Title VI of the CAAA regulates ozone depleting substances and requires a phase-out of their use. This rule applies to any facility that manufactures, sells, distributes, or otherwise uses any of the listed chemicals. Republic Conduit Manufacturing does not manufacture, sell, or distribute any of the listed chemicals. The source's use of listed chemicals is that in fire extinguishers, chillers, air conditioners and other HVAC equipment.

3. Prevention of Accidental Releases 112(r):

Republic Conduit Manufacturing does not manufacture, process, use, store, or otherwise handle one or more of the regulated substances listed in 40 CFR Part 68, Subpart F, and District Regulation 5.15, Chemical Accident Prevention Provisions, in a quantity in excess of the corresponding specified threshold amount.

4. Basis of Regulation Applicability

a. Applicable Regulations

Regulation	Title	Basis
5.00	Definitions	This regulation defines terms used in the Strategic Toxic Air Reduction Program.
5.01	General Provisions	This regulation contains a statement of general duty and a savings clause relating to federal and SIP emission standards.
5.02	Adoption and Incorporation by Reference of National Emission Standards for Hazardous Air Pollutants	This regulation incorporates by reference certain national emission standards for hazardous air pollutants in 40 CFR Parts 61 and 63.
5.20	Methodology for Determining the Benchmark Ambient Concentration of a Toxic Air Contaminant	This regulation establishes the methodology for determining the benchmark ambient concentration of a toxic air contaminant.
5.21	Environmental Acceptability for Toxic Air Contaminants	This regulation establishes the criteria for determining the environmental acceptability of emissions of toxic air contaminants
5.22	Procedures for Determining the Maximum Ambient Concentration of a Toxic Air Contaminant	This regulation establishes the procedures for determining the maximum concentration of a toxic air contaminant in the ambient air.
5.23	Categories of Toxic Air Contaminants	This regulation identifies the categories of toxic air contaminants to be addressed in these regulations.
7.06	Standards of Performance for New Indirect Heat Exchangers	This regulation establishes the requirements for new indirect heat exchangers having a capacity less than 250 MMBtu/hr and commenced after the applicable classification date.
7.08	Standards of Performance for New Process Operations	This regulation establishes the requirements for PM emission from new processes that commences construction after September 1, 1976.
7.12	Standard of Performance for New Storage Vessels for Volatile Organic Compounds	This regulation applies to each affected facility which means each storage vessel for volatile organic compounds that commences construction or modification on or after April 19, 1972, and has a storage capacity greater than 250 gallons.
7.25	Standard of Performance for New Sources Using Volatile Organic Compounds	New VOC emission facilities for which construction or modification is commenced after June 13, 1979 are subject to Regulation 7.25.
7.59	Standard of Performance for New Miscellaneous Metal Parts and Products Surface Coating Operations	Regulation 7.59 establishes the requirements for VOC emissions from new paint spray booths for metal parts commenced after May 20, 1981.

Regulation	Title	Basis
40 CFR 63, Subpart WWWWWW	National Emission Standards for Hazardous Air Pollutants: Area Source Standards for Plating and Polishing Operations	This regulation establishes HAP area source standards for plating and polishing operations.
40 CFR 63 Subpart ZZZZ	National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	This regulation establishes national emission limitations and operating limitations for HAP emitted from stationary RICE located at major and area sources of HAP emissions.

b. **Plantwide**

Republic Conduit Manufacturing is a potential major source for the pollutant VOC and Single HAP (HCl). Regulation 2.17 – Federally Enforceable District Origin Operating Permits establishes requirements to limit the plant wide potential emission rates to below major source threshold levels and to provide methods of determining continued compliance with all applicable requirements. The source requested limits of the criteria pollutant VOC < 100 ton/yr and Single HAP < 10 ton/yr to be a FEDOOP. The source is not major for Greenhouse Gases.

Regulations 5.00, 5.01, 5.20, 5.21, and 5.23 (STAR Program) establishes requirements for environmental acceptability of toxic air contaminants (TACs) and the requirement to comply with all applicable emission standards. Republic Conduit submitted the TAC Environmental Acceptability Demonstration to the District in September 2008, March 2009, and July 2009. Tier 4 AERMOD air dispersion modeling was performed for each emission unit that has non-de minimis TAC emissions. Compliance with the STAR EA Goals was demonstrated in the revised EA Demonstration submitted in July, 2009. EA Demonstration was updated in May, 2019 according to material changes and updated emission factors per new stack tests. The following table demonstrates that the carcinogen risk and non-carcinogen risk values comply with the STAR EA goals required in Regulation 5.21.

Plant-wide Sum	All new P/PE		All new P/PE	
Industrial Total R_C	**1.06**	< 75		< 38
Non-Ind. Total R_C	**1.05**	< 7.5		< 3.8
Industrial Total R_{NC} (max)	**0.21**	< 3.0		
Non-Ind. Total R_{NC} (max)	**0.20**	< 1.0		

		R_{NC} Total			LEMT Line				Hot Dip Galv. Line			
		Indus.	Non-Ind.	R_{NC}	Industrial		Non-Ind.		Industrial		Non-Ind.	
TAC	CAS #	R_{NC}	R_{NC}	EA	R_C	R_{NC}	R_C	R_{NC}	R_C	R_{NC}	R_C	R_{NC}
Plant-wide Total Risk		**0.21**	**0.20**	0	**0.16**		**0.15**		**0.89**		**0.89**	
Nitric acid	7697-37-2	0.04	0.04	<3.0/1.0	0.00	0.04	0.00	0.04	0.00	0.00	0.00	0.00
Sulfuric acid	7664-939-9	0.21	0.20	<3.0/1.0	0.00	0.21	0.00	0.20	0.00	0.00	0.00	0.00
HCl	7647-01-0	0.01	0.01	<3.0/1.0	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01
Xylene	1330-20-7	0.03	0.03	<3.0/1.0	0.00	0.03	0.00	0.03	0.00	0.00	0.00	0.00
Ethyl Benzene	100-41-4	0.00	0.00	<3.0/1.0	0.16	0.00	0.15	0.00	0.00	0.00	0.00	0.00
Chromium +6	7440-47-3	0.01	0.01	<3.0/1.0	0.00	0.00	0.00	0.00	0.89	0.01	0.89	0.01
Aluminum Oxide	7429-90-5	0.01	0.01	<3.0/1.0	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.01

Regulation 2.17, section 5.2, requires monitoring and record keeping ensuring ongoing compliance with the terms and conditions of the permit. The owner or operator shall maintain all the required records for a minimum of 5 years and make the records readily available to the district upon request.

Regulation 2.17, section 7.2, requires stationary sources for which a FEDOOP is issued to submit an Annual Compliance Certification by April 15, of the following calendar year. In addition, as required by Regulation 2.17, section 5.2, the source shall submit an Annual Compliance Report to show compliance with the permit, by March 1 of the following calendar year. Compliance reports and compliance certifications shall be signed by a responsible official and shall include a certification statement per Regulation 2.17, section 3.5.

c. **Emission Unit U1 –** Weld Mills

EP	Description	Applicable Regulations
E3	Weld mill 3, make Thermatool, model CFl4-5006460, capacity 18 ton/hr	7.08, 7.25
E4	Weld mill 4, make Thermatool, model CFl4-5006460, capacity 18 ton/hr	7.08, 7.25
E5	Weld mill 5, make Thermatool, model CFl4-5006460, capacity 31 ton/hr	7.08, 7.25
E100	One (1) cooling tower, make Marley, model NC-8310F2, capacity 30,000 gal/day	7.08

i. **Standards/Operating Limits**

1) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

2) **PM**

(a) The emission standard for PM is determined in accordance with Regulation 7.08, section 3.1.2 and based on capacity of the equipment.

3) **VOC**

(a) This unit is subject to Regulation 7.25 because of VOC emissions from weld mill coolant. On January 6, 2014, Republic Conduit submitted a BACT analysis.

(b) The District established VOC emission standards.

d. **Emission Unit U2 –** LEMT Electro Galvanizing Line

EP	Description	Applicable Regulations
E7	Descaler process tank with three heaters, capacity 30 ton/hr	STAR,7.08
E10	Electroclean process tank with two heaters, capacity 30 ton/hr	STAR,7.08
E12A	Moisture dry oven, make Automated Solutions	STAR, 7.08
E12B	Paint dry oven, make Automated Solutions	STAR, 7.08
E18A	Zinc dissolver tank (T-32), make Indelco, capacity 2,000 gallon	STAR,7.08,
E21	Rinse, pickle, plating, and post plating bath tanks, capacity 30 ton/hr	STAR,7.08, 40CFR63, WWWWWW
E30B	Ink transfer labeler with two print heads, make Promark	STAR, 7.25

i. **Standards/Operating Limits**

1) **HAP**

(a) 40 CFR 63, Subpart WWWWWW establishes emission limitations, work practice standards, and operating limits for this unit.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

3) **PM**

(a) The emission standard for PM is determined in accordance with Regulation 7.08, section 3.1.2 and based on capacity of the equipment.

4) **TAC**

(a) The LEMT galvanizing line has sulfuric acid emission standards since its EA Demonstration was based on controlled PTE. AERMOD modeling results and controlled PTE for sulfuric acid were used to demonstrate compliance with EA Goals.

(b) It has been demonstrated that the uncontrolled sulfuric acid emissions from the LEMT line cannot meet the EA goals specified in Regulation 5.21. Therefore, the owner or operator is required to operate the wet scrubber to meet the TAC standards.

5) **VOC**

(a) Regulation 7.25 establishes standards for all affected facilities subject to Regulation 7.25, including LEMT ink transfer labeler (U2: E30B) and ink-jet printers (U4: E13-D1, E13-D2).

(b) It has been demonstrated that the total potential VOC emissions from LEMT ink transfer labeler (U2: E30B) and ink-jet printers (U4: E13-D1, E13-D2) cannot exceed 5 tpy uncontrolled. Therefore, they are in compliance with Regulation 7.25 and a BACT analysis is not required.

ii. **Monitoring, Recordkeeping, and Reporting**

1) **HAP**

(a) 40 CFR 63, Subpart WWWWWW establishes monitoring, recording keeping, and reporting requirements for this unit.

iii. **Testing**

1) **PM/Cr(3)/H2SO4/HNO3**

(a) The owner or operator is required to retest the control devices within ten (10) years since the most recent District accepted performance test. The last stack test on wet scrubber (C21) was conducted in April 2012.

e. **Emission Unit U3 –** Hot Dip Galvanizing Line

EP	Description	Applicable Regulations
E23	Hot dip enclosure (strip, degreasing, flux, and pickling tanks), make Gimeco	STAR,7.08
E25A	Dryer 1, make Gimeco, capacity 28 ton/hr	STAR,7.08
E25B	Zinc kettle, make Gimeco, capacity 28 ton/hr	STAR,7.08
E25C	Hot dip blow-out with two (2) process cyclones, make Gimeco, capacity 28 ton/hr	STAR,7.08
E28	Passivation spray with water rinse tank, make Gimeco/Harrington, 28 ton/hr	STAR,7.08, 40CFR63 Subpart WWWWWW
E29	Dryer 2, make Gimeco, 28 ton/hr	STAR,7.08

i. **Standards/Operating Limits**

1) **HAP**

(a) 40 CFR 63, Subpart WWWWWW establishes emission limitations, work practice standards, and operating limits for this unit.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%, for processes that commenced construction after September 1, 1976.

3) **PM**

(a) The emission standard for PM is determined in accordance with Regulation 7.08, section 3.1.2 and based on capacity of the equipment.

(b) Republic Conduit can change screws to accommodate conduit sizes without control. PM emissions are generated when changing screws and

the baghouse hood must be removed to change the screws. It has been demonstrated that the PM and TAC emissions during this activity cannot exceed their limits uncontrolled.

4) **TAC**

(a) This unit has TAC emission standards since its EA Demonstration was based on controlled PTE. If the controlled PTE for the TAC is less than de minimis level, use De Minimis as limit. If the controlled PTE for the TAC is greater than de minimis level, modeling results were used to calculate risk value to compare to the EA Goals and controlled PTE is used as limit.

(b) It has been demonstrated that the uncontrolled potential TAC emissions from the hot dip galvanizing line cannot meet the EA goals specified in Regulation 5.21. Therefore, the owner or operator is required to operate the wet scrubber and mist eliminator to meet the TAC standards.

ii. **Monitoring, Recordkeeping, and Reporting**

1) **HAP**

(a) 40 CFR 63, Subpart WWWWWW establishes monitoring, recording keeping, and reporting requirements for this unit.

iii. **Testing**

1) **PM/HCl**

(a) The owner or operator is required to retest the control devices within ten (10) years since the most recent District accepted performance test. The last stack test on wet scrubber (C23) and baghouse (C25) was conducted in April 2010.

f. **Emission Unit U4 –** Thread Lines

EP	Description	Applicable Regulations
E13-A	Thread line #1, 15 ton/hr	STAR, 7.25
E13-B	Thread line #2, 15 ton/hr	STAR, 7.25

EP	Description	Applicable Regulations
E13-C	Thread line LOD, 15 ton/hr	STAR, 7.25
E13-D1	Ink-jet printer, make Promark, capacity 750 prints/hr	STAR, 7.25
E13-D2	Ink-jet printer, make Promark, capacity 750 prints/hr	STAR, 7.25

i. **Standards/Operating Limits**

1) **TAC**

(a) TAC emissions from insignificant activities of this unit are de minimis per Regulation 5.21, section 2.3.

2) **VOC**

(a) This unit is subject to Regulation 7.25 because of VOC emissions from weld mill coolant. On January 6, 2014, Republic Conduit submitted a BACT analysis.

(b) The District established VOC emission standards.

(c) Regulation 7.25 establishes standards for all affected facilities subject to Regulation 7.25, including LEMT ink transfer labeler (U2: E30B) and ink-jet printers (U4: E13-D1, E13-D2).

(d) It has been demonstrated that the total potential VOC emissions from LEMT ink transfer labeler (U2: E30B) and ink-jet printers (U4: E13-D1, E13-D2) cannot exceed 5 tpy uncontrolled. Therefore, they are in compliance with Regulation 7.25 and a BACT analysis is not required.

g. **Emission Unit U5** – Natural gas-fired boilers and heaters

EP	Description	Applicable Regulations
E14-A1	Hot dip boiler 1, make Superior Boiler Works, model Super Seminole X6-X-1000, 8.369 MMBtu/hr	STAR,7.06
E14-A2	Hot dip boiler 2, make Superior Boiler Works, model Super Seminole X6-X-1000, 8.369 MMBtu/hr	STAR,7.06
E14-A3	E-galv boiler, make Cleaver Brooks, FLX-700-800-16HW, 7.0 MMBtu/hr	STAR,7.06

EP	Description	Applicable Regulations
E14-A4	E-galv temp boiler, make LAARS Heating Systems, model Mighty Therm II MT2H1000NAC KICXN, 0.999 MMBtu/hr	STAR
E14-A5	HD economizer temp boiler, make Maxon, model Mighty Therm II MT2H1000NAC KICXN, 0.999 MMBtu/hr	STAR
E14-B1	Hop dip superheater, make GTS Energy, model VC-110-406 50, 1.0 MMBtu/hr	STAR
E14-B2	Dryer 1 heater, make ESA Pyronics, model 32 XNM/GA-R-D, 3.06 MMBtu/hr	STAR
E14-B3	Twelve (12) zinc kettle heaters, make ESA Pyronics, model SW 5-GA, 1.0 MMBtu/hr each	STAR
E14-B4	Hot dip dust burner, make Maxon, model Kinemax Medium Velocity, 1.0 MMBtu/hr	STAR
E14-B5	Five (5) building heater, make Cambridge, model S1850, 1.85 MMBtu/hr each	STAR
E14-B6	Six (6) make-up air heaters, make Rapids, model 4054-MUA, 5.4 MMBtu/hr each	STAR
E14-B7	Three (3) E-galv descaler heat exchangers, make Maxon, model 6" Tube-O-Therm Burner, 2.0 MMBtu/hr each	STAR
E14-B8	Two (2) E-galv E-clean heat exchangers, make Maxon, model 6" Tube-O-Therm Burner, 2.0 MMBtu/hr each	STAR
E14-B9	Dryer 2 heater, make ESA Pyronics, model 32 XNM/GA-R-D, 3.06 MMBtu/hr	STAR
E14-B10	Zinc furnace, make Riello, model 40-N400S, 0.2 MMBtu/hr	STAR
E14-B11	Two (2) Thread line burners, make IMECO, model Ensign T2, 0.29 MMBtu/hr each	STAR
E14-B12	LEMT moisture dry oven, make Maxon, model Ovenpak 425, 2.75 MMBtu/hr	STAR
E14-B13	LEMT paint dry oven, make Maxon, model Ovenpak 425, 0.55 MMBtu/hr	STAR

i. **Standards/Operating Limits**

1) **Opacity**

(a) Regulation 7.06, section 4.2 establishes an opacity standard of less than 20%, for the affected facility.

2) **PM**

(a) The PM emission standard for boilers is determined in accordance with Regulation 7.06, section 4.1.4 and based on capacity of the equipment.

(b) A one-time compliance demonstration has performed for PM and SO2 for the boilers, process heaters and oven using AP-42 emission factors and combusting natural gas and propane, the regulatory emission standards cannot be exceeded. Therefore, there are no monitoring, record keeping, and reporting requirements for these boilers, process heaters and oven with respect to PM and SO_2 emission limits.

3) **SO_2**

(a) The SO_2 emission standard for boilers is determined in accordance with Regulation 7.06, section 5.1.1 and based on capacity of the equipment.

4) **TAC**

(a) TAC emissions from natural gas or propane combustion are de minimis per Regulation 5.21, section 2.7.

h. **Emission Unit U6** – Paint coating operations

EP	Description	Applicable Regulations
E6	Weld flaw paint marking system for weld mills (U1)	STAR, 7.08, 7.59
E22A	ID painting with dry oven for LEMT galvanizing line (U2)	STAR, 7.08, 7.59
E22C	Flaw paint spray operation (3 spray guns) for LEMT galvanizing line (U2)	STAR, 7.08, 7.59
E13-A1	Threaded ends coating for thread line (U4) – Thread Line #1 (2 spray nozzles)	STAR, 7.08, 7.59
E13-A2	Flaw paint spray for thread line (U4) – Thread Line #1 (2 spray guns)	STAR, 7.08, 7.59
E13-B1	Threaded ends coating for thread line (U4) -Thread Line #2 (2 spray nozzles)	STAR, 7.08, 7.59
E13-B2	Flaw paint spray for thread line (U4) – Thread Line #2 (2 spray guns)	STAR, 7.08, 7.59
E13-C1	Threaded ends coating for thread line (U4) -Thread Line LOD	STAR, 7.08, 7.59
E102	Aerosol touch up coating operation	STAR, 7.08, 7.59

i. **Standards/Operating Limits**

1) **HAP**

(a) The equipment or processes covered by this permit are not currently subject to the standards of the NESHAP, 40 CFR 63 Subpart HHHHHH, due to the absence of the target HAPs in the spray coatings and paint stripping compounds.

2) **Opacity**

(a) Regulation 7.08, section 3.1.1 establishes an opacity standard of less than 20%.

3) **PM**

(a) In accordance with Regulation 7.08, section 3.1.2, Table 1, since the process rate for this equipment is less than 0.5 ton/hr, the emission standard for PM is 2.34 lb/hr.

4) **TAC**

(a) TAC emissions from this unit are de minimis per PTE evaluation.

5) **VOC**

(a) Regulation 7.59, section 3.1 defines the VOC content limits for the coatings used for miscellaneous metal parts and products surface coating operation.

ii. **Monitoring and Record Keeping**

1) **VOC**

(a) Regulation 7.59, section 6.1 and 6.2 establishes monitoring and record keeping requirements for affected facility.

III. Other Requirements

1. Temporary Sources:

The source did not request to operate any temporary facilities.

2. Short Term Activities:

The source did not report any short term activities.

3. Emissions Trading:

The source is not subject to emission trading.

4. Alternative Operating Scenarios:

The source did not request any operation flexibility.

5. Compliance History:

Date	Regulation Violated	Settlement
4/15/2007	Reg. 1.06, section 4 and 5	Agreement with fine

6. Calculation Methodology or Other Approved Method:

Emissions are calculated by multiplying the throughput (ton, MMCF, gallons, etc) or hours of operation of the equipment by the appropriate emission factor and 1 minus any control device's efficiency. The following emission factors and calculation methodology shall be used unless other methods or emission factors are approved in writing by the District.

For weld mills (U1), LEMT electro galvanizing line (U2), hot dip galvanizing line (U3), and thread line (U4), emission factors are shown in the following table. If emission factors were determined by stack test results, the owner or operator shall retest the emission unit within ten (10) years since the most recent District accepted stack test, according to Attachment C – General Testing Requirements.

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Sources	Projected Retest Date Prior to…
U1	Weld mills	PM/PM_{10}	lb/ton	0.0054	0.0011	Stack test, July 2018	July 2028
		VOC	lb/ton	0.0446		BACT Analysis, 2014	
			OR, mass balance method based on actual coolant usage				
U2	LEMT line	PM/PM10	lb/ton	0.011	0.0026	Stack test, April 2012	April 2022
		Chromium (Cr) III	lb/ton	1.7E-06	1.6E-06	Stack test, April 2012	April 2022
		Sulfuric Acid	lb/ton	1.6E-02	3.2E-03		
		Nitric Acid	lb/ton	2.0E-04	3.7E-03		
U3	E23 (Hot dip enclosure)	PM/PM_{10}	lb/ton	0.005	0.005	Stack test, April 2010	April 2020
		Hydrochloric Acid	lb/ton	0.082	0.003		
	E25A, B, C (dryer, zinc kettle, blowout)	PM/PM_{10} (Captured)	lb/ton	0.308	0.005	Stack Test April 2010	April 2020
		PM/PM_{10} (Fugitive)	lb/ton	0.05076	0.05076	Engineer Judgement	

Unit ID	Emission Point Description	Pollutants	Emission Factors Unit	Uncontrolled Emission Factors	Controlled Emission Factors	Emission Factor Sources	Projected Retest Date Prior to…
	Normal Operation	Al (Captured)	lb/ton	8.3E-06	1.4E-07	Republic Kettle Analysis	
		Al (Fugitive)	lb/ton	1.37E-06	1.37E-06		
		Pb (Captured)	lb/ton	3.7E-04	6.0E-06		
		Pb (Fugitive)	lb/ton	6.09E-05	6.09E-05		
	E25A, B, C (dryer, zinc kettle, blowout) Screw Changes	PM/PM_{10}	lb/ton	0.0036	N/A	EPA-905/4-76-002	
		Aluminum (Al)	lb/ton	9.7E-8	N/A	Republic Kettle Analysis	
		Lead (Pb)	lb/ton	4.3E-6	N/A		
	E28 (Passivation)	Chromium (Cr) VI	lb/ton	4.33E-05	2.14E-5	Stack test, Oct. 2018	Oct. 2028
		Chromium (Cr) III	lb/ton	1.09E-4	5.38E-5		
U4	Thread line	VOC	lb/ton	0.021		BACT Analysis, 2014	
			OR, mass balance method based on actual coolant usage				

For natural gas-fired boilers (U5), emission factors from AP-42, 1.4, Natural Gas Combustion, shall be used for emission calculations.

For paint coating operations (U6), emissions shall be calculated using mass balance method and based on pollutant contents in material safety data sheet (MSDS).

For internal combustion engine, emission factors from AP-42, 3.3, Gasoline and Diesel Industrial Engines, shall be used for emission calculations.

7. Insignificant Activities

Equipment	Qty.	PTE (tpy)	Regulation Basis
Lime silo with baghouse used for water treatment plant (See Note 7)	1	1.34 PM_{10}	Regulation 1.02
Zinc dissolver tank E18a (See unit U2)	1	0	Regulation 1.02
Flaw paint spray guns (See unit U2 and U4)	7	3.2 PM_{10}	Regulation 1.02
Inkjet printers (See unit U4)	2	0.014 VOC	Regulation 1.02
Natural gas-fired boilers and heaters (See unit U5)	18	3.58 NOx	Regulation 1.02
Cold solvent parts washers, each equipped with a secondary reservoir (See unit IA3)	9	0.01 VOC	Regulation 1.02, Appendix A
Emergency generator, 535 HP (See unit IA1)	1	4.15 NOx	Regulation 1.02
Zinc recovery furnace	1	0.07 PM_{10}	Regulation 1.02
Storage tanks (See unit IA2)	30	0.58 VOC	Regulation 1.02
Temporary storage totes (See unit IA2)	< 172	0.03 VOC	Regulation 1.02

1. Insignificant activities identified in District Regulation 1.02, Appendix A, may be subject to size or production rate disclosure requirements.

2. Insignificant activities identified in District Regulation 1.02, Appendix A shall comply with generally applicable requirements.

3. The owner or operator shall annually submit an updated list of insignificant activities that occurred during the preceding year, with the compliance certification due April 15th.

4. Emissions from Insignificant Activities shall be reported in conjunction with the reporting of annual emissions of the facility as required by the District.

5. The owner or operator may elect to monitor actual throughputs for each of the insignificant activities and calculate actual annual emissions, or use Potential to Emit (PTE) as the annual emissions for each piece of equipment.

6. The District has determined that no monitoring, recordkeeping, or reporting requirements apply to the insignificant activities listed, except for the equipment that has an applicable regulation and permitted under an insignificant activity (IA) unit.

7. The lime silo is subject to Regulation 7.08 and subject to 2.34 lb/hr PM standard and 20% opacity standard. It has been demonstrated that the lime silo cannot exceed the PM and opacity uncontrolled. Therefore, there are no monitoring, record keeping, and reporting requirement for this equipment.

8. Basis of Regulation Applicability for IA units

a. **Emission Unit IA1 –** Emergency generator

EP	Description	Applicable Regulations
E60	One (1) 535 HP (399 kW) emergency generator, make Cummins, model DFCC-5740131, engine model NTA855-03. Model year 2005 (Tier 2)	40 CFR 63, ZZZZ, STAR

i. **Standards/Operating Limits**

1) **HAP**

(a) 40 CFR 63.6595, 6603, 6604, 6605, and 6640 establish emission standards and compliance requirements for the owner or operator or manufacturer of the emergency stationary CI ICE.

2) **TAC**

(a) TAC emissions from insignificant activities of this unit are de minimis per Regulation 5.21, section 2.3.

ii. **Monitoring and Record Keeping**

1) **HAP**

(a) 40 CFR 63.6625 and 6655 establish monitoring and record keeping requirements for emergency stationary CI ICE.

iii. **Reporting**

1) **HAP**

(a) 40 CFR 63, Subpart ZZZZ, Footnote 2 of Table 2d establishes reporting requirements for emergency stationary CI ICE.

b. **Emission Unit IA2** – Storage tanks and totes

EP	Description	Applicable Regulations
E100	Storage tanks and temporary storage totes with various contents and capacity.	STAR, 7.12

i. **Standards/Operating Limits**

1) **VOC**

(a) Regulation 7.12, section 3.3 establishes emission standards for VOC storage vessels.

2) **TAC**

(a) TAC emissions from insignificant activities of this unit are de minimis per Regulation 5.21, section 2.3.

c. **Emission Unit IA3 – Parts Washers**

EP	Description	Applicable Regulations
IE1 – IE9	Nine (9) parts washers, each equipped with a secondary reservoir	STAR, 6.18

i. **Standards/Operating Limits**

1) **VOC**

(a) Regulation 6.18, section 4 establishes operating standards for parts washers.

2) **TAC**

(a) TAC emissions from insignificant activities of this unit are de minimis per Regulation 5.21, section 2.3.

9. Source-Wide Activities Not Otherwise Regulated

Equipment Description	Qty	Make	Model
Water treatment equipment, including collection sump, equalization tank, lime slurry recirculation tank, neutralization tanks, clarifier, filter press, sludge contact tank, gravity filters, post neutralization tank, and effluent monitoring tank	1	N/A	N/A
Hydrochloric acid (HCl) regeneration unit used for hot dip galvanizing line U3-E23, including filtration unit, reaction unit, solid separation unit, piping and service devices.	1	Soprin	N/A
Totes for Ferric Chloride Brenntag	5	N/A	N/A
Totes for Magnesium Bi-sulfate	30	N/A	N/A
Totes for Sodium Hydroxide	5	N/A	N/A
Totes for Hydrogen Peroxide	2	N/A	N/A
Totes for Flux ZnCl NH3Cl4	20	N/A	N/A
Totes for Ferrous Sulfate	25	N/A	N/A